In the claims:

1. (currently amended) An ultrasonic flow sensor having

– at least one ultrasonic converter (A, B) for transmitting and receiving ultrasonic signals (A0, B0) and

– a receiver unit (4) that is connected to the ultrasonic converter (A, B), monitors when the ultrasonic signal (A0, B0) exceeds a predetermined threshold value (SW), and, depending on this event, determines a reception time (t_0) of the ultrasonic signal (A0, B0),

wherein the receiver unit (4) determines a piece of information about the amplitude (Amp) of the ultrasonic signal (A0, B0) and adapts the threshold value (SW) based on the information determined; wherein the receiver unit (4) has a first S/H stage (12), whose input (US) is supplied with a converter output signal (5), and a subsequent second S/H stage (13), which adopts and stores the maximum value (Amp_{max}) of the first S/H stage (12).

Claim 2 cancelled.

3. (currently amended) The ultrasonic flow sensor as recited in claim ~~2~~1,

wherein a voltage divider (14) is provided, which divides the output signal (20) of the second S/H stage (13), and a comparator (16) is provided, which is supplied with the partial voltage from the voltage divider (14).

4. (previously presented) The ultrasonic flow sensor as recited in claim **1**,

wherein a low-pass filter (15) is provided, which filters the piece of information about the signal amplitude (Amp_{max}) or a piece of information (U_t) derived from it.

5. (previously presented) The ultrasonic flow sensor as recited in claim **1**,

wherein the receiver unit (4) has a rectifier (21) that rectifies the converter output signal (5).

6. (previously presented) The ultrasonic flow sensor as recited in claim **1**,

wherein the receiver unit (4) has a differentiator (23), which is supplied with the converter output signal (5), and has a subsequent zero crossing detection unit (24).

7. (currently amended) A method for detecting the reception time (t_0) at which an ultrasonic signal (A0, B0) is received in an ultrasonic converter (A, B), using a receiver unit (4) that monitors when the ultrasonic signal (A0, B0) exceeds a predetermined threshold value (SW) and, depending on this event, determines a reception time (t_0) of the ultrasonic signal (A0, B0),

wherein the receiver unit (4) determines a piece of information about an amplitude (Amp) of the ultrasonic signal (A0, B0) and the threshold value (SW) is adapted as a function of the determined information (Amp), wherein a first S/H stage (12) stores the maximum amplitude value (Amp_{max}) of the ultrasonic signal (A0, B0) and a second S/H stage (13) scans and stores the maximum value (Amp_{max}) of the first S/H stage (12).

Claim 8 cancelled.

9. (original) The method as recited in claim 7,

wherein the amplitude information (Amp, out) is obtained from the output signal (u_0, $u_{pi/2}$) of two lock-in amplifiers (41, 42; 41, 43).